



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



441191

09 NOV 2012

REPLY TO THE ATTENTION OF:

MEMORANDUM

DATE:

SUBJECT: Enforcement Action Memorandum – Determination of Threat to Public Health and or the Environment at the Lindsay Light II Site/164 East Grand Chicago, Cook County, Illinois (Site Spill ID # YT, OU 20)

FROM: Verneta Simon, On-Scene Coordinator *VS*
Emergency Response Branch II – Removal Section 4

Eugene Jablonowski, Health Physicist
Emergency Response Branch I – Field Services Section

THRU: Sam Borries, Chief *Sam Borries*
Emergency Response Branch II

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

The purpose of this Enforcement Action Memorandum is to document the determination of an imminent and substantial threat to public health and the environment posed by the existence of thorium-contaminated soils at Lindsay Light II Operable Unit (“OU”) 20, 164 East Grand Site (“Site”). The Site is approximately 0.11 acres and is located in an area known as “Streeterville” that, beginning in 1993, has been the subject of several removal actions to remove radioactive thorium waste. To date, U.S. EPA has not initiated any response actions using the On-Scene Coordinator \$50,000/\$250,000 delegation and warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS # ILD 0000002212

A. Site Description

1. Removal site evaluation

In November 2000, U.S. EPA performed a walk-over radiological survey of the side parking lot area at the Site but did not discover any elevated gamma. The agency informed the then owner that no elevated gamma readings were found but cautioned that if the asphalt or concrete covering the ground was removed or subsurface soils were excavated, it would be necessary to conduct additional radiological monitoring.

On October 5, 2012, Vincent Oleskiewicz, legal counsel representing the owner and developer of 164 East Grand Avenue, Chicago, Illinois, contacted U.S. EPA Associate Regional Counsel, Mary Fulghum, to inform her that his client, Old Veteran Construction, Inc. ("OVC"), had encountered elevated gamma while excavating beneath the lower level slab foundation to strengthen the current foundation and accommodate planned renovations. During construction, OVC hired a radiation monitoring contractor, Stan A. Huber, Associates of New Lenox, Illinois. Upon locating elevated gamma readings, Mr. Huber advised OVC to stop work until they had conferred with U.S. EPA. U.S. EPA On-Scene Coordinator Verneta Simon and Health Physicist Eugene Jablonowski visited 164 East Grand on October 15, 2012 and received a copy of Huber's sample results. The highest sample result was 71.75 picoCuries per gram ("pCi/g"), exceeding the Streeterville clean-up criterion of 7.1 pCi/g. On October 17, another meeting was held in the U.S. EPA office with the respective counsel to discuss an Administrative Settlement Agreement on Consent ("ASAOC") that would allow the renovation project to restart.

2. Physical location

This Site is located at 164-166 East Grand Avenue, Chicago, Cook County, Illinois (Figure 1). The Site is 0.11 acres. The geographical coordinates for the Site are Latitude 41.8918384 and Longitude 87.6228515. Immediately surrounding this Site are several properties where U.S. EPA previously identified thorium contaminated soils above the 7.1 pCi/g clean-up level and required remediation. Figure 2, the City of Chicago Streeterville Thorium Map, identifies the properties that EPA has evaluated and/or remediated since 1993. This Site is located across the street from Lindsay Light I, 161 East Grand Avenue where the Lindsay Light Company ("Lindsay Light") refined monazite ore to produce thorium nitrate and manufactured thorium-impregnated gas mantles.

An Environmental Justice ("EJ") analysis was performed and is contained in Attachment 1. The area surrounding the Lindsay Light II Site/OU 20 was screened for EJ concerns using Region 5's EJAssist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool ("EJSEAT")). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The Lindsay Light II Site / OU 20 is in a census tract with a score of 3 (Attachment 1). However, the experience EPA has from directly working with the local community for several years has not indicated any EJ concerns, so based on our site-specific knowledge we do not consider this site to be an EJ area of concern.

3. Site Characteristics

This property was most recently used as a restaurant with a side parking lot.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Stan Huber's sample results demonstrated the elevated gamma detected on October 5 was due to encountering thorium contaminated soil beneath the building's foundation. As mentioned earlier, the highest sample result indicated 71.75 pCi/g total radium which exceeded the 7.1 pCi/g cleanup criterion for the Streeterville neighborhood. Copies of pertinent surveys, e-mail messages and analytical reports are contained in the Administrative Record.

5. NPL status

This site is not on the National Priorities List (NPL).

B. Other Actions to Date

1. Previous actions

U.S. EPA has been assessing and overseeing the cleanup of Lindsay Light-related thorium contamination in the Streeterville area of Chicago since 1993. In 1996, U.S. EPA issued a Unilateral Administrative Order ("1996 UAO") to Kerr-McGee Chemical LLC, the successor corporation to Lindsay Light, and to the owner and developer of 316 East Illinois Street. In 2000, U.S. EPA amended the UAO to include the property west of the site, 200 East Illinois, otherwise known as Lindsay Light II/RV3 Site. Since 2000, with U.S. EPA's direction and oversight generally provided pursuant to consensual orders, property owners and developers have investigated and cleaned up more than 11 thorium-contaminated properties associated with Lindsay Light contamination in Streeterville. The action memoranda and respective administrative records for these actions are incorporated by reference into this decision document as set forth in the administrative record (Attachment 2).

2. Current actions

Standard Bank & Trust Co., as Trustee under Trust Number 21032, dated May 18, 2011, is the owner of the property. OVC is the developer of the property. This property was purchased during an auction and OVC was in the process of renovating it, when OVC encountered elevated gamma.

C. State and Local Authorities' Roles

1. State and local actions to date

In 1999, the City of Chicago through the Department of Environment established Right-of-Way permit procedures to ensure radiological screening before and during work exposing or intruding into subsurface soils in Streeterville rights-of-ways. A description of the procedures and a map¹ of the Streeterville Thorium Investigation are all available on the City of Chicago's website. The map is also attached to this Memorandum as Figure 2.

The State of Illinois's role is described below in Section C.2.

¹ Please note the map of the Streeterville Thorium Investigation Area is dated June 15, 2010. Since that date, known contamination has been removed from 211 East Grand and thorium contamination has been identified at 515 North Peshtigo.

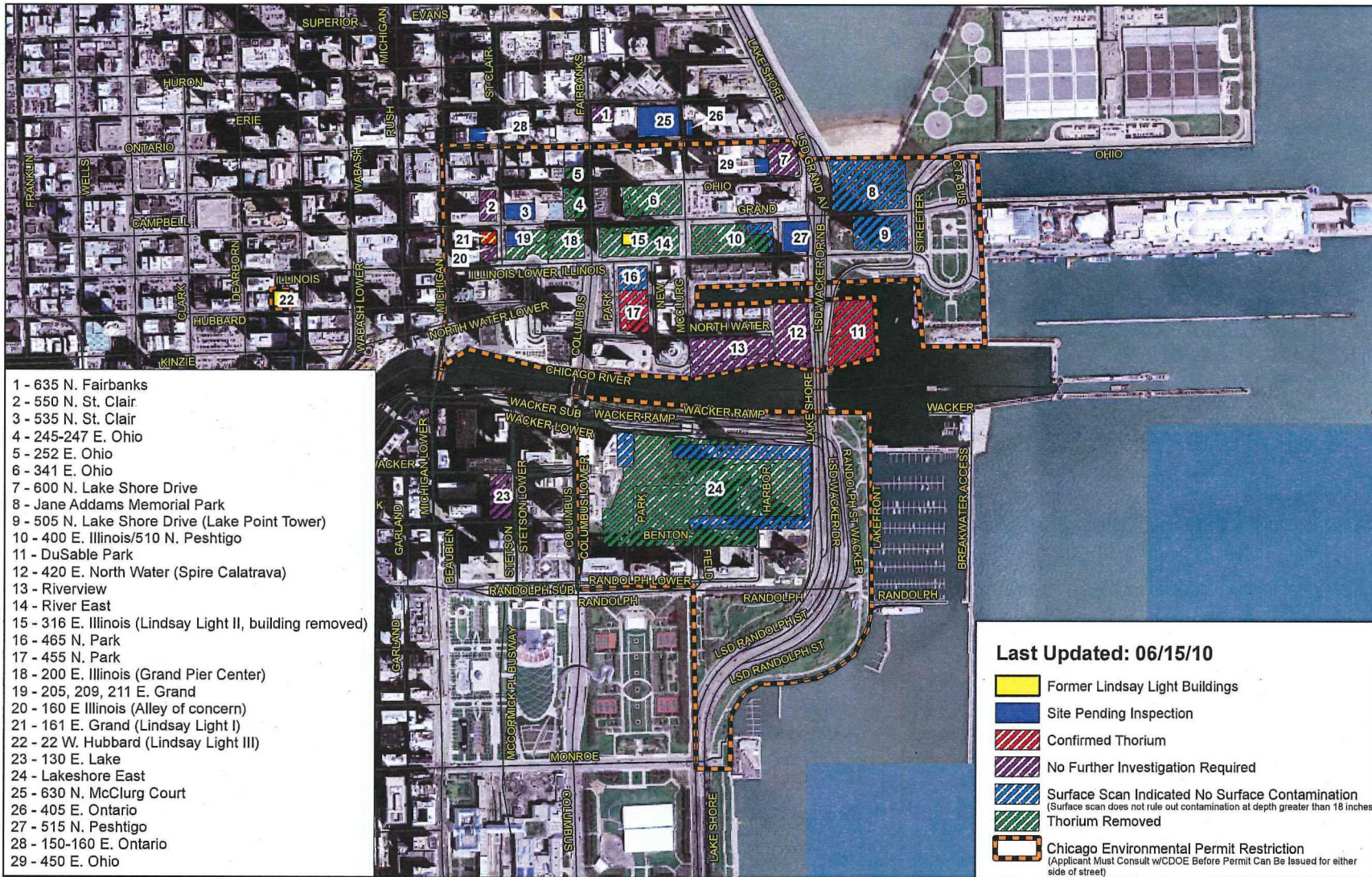
Figure 1 Lindsay Light II Site/ OU20 164 East Grand



0 0.015 0.03 0.06
Miles



Streeterville Thorium Investigation



S:\BRN_FLOD\Streeterville Thorium\Aerial Map

Area Boundaries are approximate

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City of Chicago
 Richard M. Daley
 Mayor

Department of
 Environment
 Suzanne Malec-McKenna
 Commissioner



2. Potential for continued State/Local response

Beginning in 1993, U.S. EPA has directed CERCLA response activities for Lindsay Light-related thorium contamination in Streeterville. In 1993, the Illinois Department of Nuclear Safety (now known as the Illinois Emergency Management Agency, Division of Nuclear Safety or "IEMA") participated in a joint building survey with U.S. EPA and ATSDR. IEMA has had very limited involvement with the Lindsay Light removal sites because the Lindsay Light facility in downtown Chicago did not hold an Atomic Energy Commission, Nuclear Regulatory Commission ("NRC") or Illinois Agreement State authority conferred by the NRC. In contrast, IEMA has been and is currently involved with the Kerr-McGee West Chicago National Priorities List ("NPL") sites associated with the Rare Earths Facility. The Rare Earths Facility was a federally licensed radioactive materials facility and is currently licensed by IEMA, under Agreement State authority. Due to limited resources, it appears unlikely the State will now choose to become involved in the unlicensed Lindsay Light response and enforcement activities.

The U.S. EPA has been working to develop the City of Chicago's capacity to conduct future thorium monitoring and clean up in Streeterville by awarding a Cooperative Agreement to the City of Chicago on September 25, 2012 to address the contamination in the Streeterville Right-of-Ways. This Cooperative Agreement and a similar Cooperative Agreement with the Chicago Park District to remove thorium contamination in DuSable Park were funded by a bankruptcy settlement with Tronox, LLC, a former subsidiary of Kerr-McGee and successor to Lindsay Light.

III. THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions at the Site may pose an imminent and substantial endangerment to public health or welfare or the environment, based upon factors set forth in the National Contingency Plan ("NCP"), 40 Code of Federal Regulations ("CFR") Section 300.415 (b)(2). These conditions include:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

Given our extensive experience in Streeterville, the proximity of this site to other Lindsay Light contaminated properties, the latest soil concentration sample and gamma results, it has been demonstrated that thorium-contaminated soils related to Lindsay Light are present at this Site. Given the property owner's plan to renovate, a potential exposure threat exists. On October 29, 2012, U.S. EPA entered into an Administrative Settlement Agreement and Order on Consent (Settlement Agreement) with the property owner, Standard Bank & Trust Co., a Trustee under Trust Number 21032 dated May 19, 2011.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate;

Given the elevated gamma measurements detected on October 5, 2012 and the analytical soil result of 71.75 pCi/g, if proper measures to identify and control radiological contamination are not implemented, thorium contaminated wastes may be released during renovation and construction work.

Other situations or factors which may pose threats to public health or welfare or the environment;

Beginning in approximately 1904, the Lindsay Light manufactured gas lights and gas mantles for residential and commercial use, at several locations in the Streeterville neighborhood of Chicago. The historic record regarding Lindsay Light's volume of thorium production in Streeterville is uncertain. According to a U.S. Tariff Commission document on the Incandescent Gas-Mantle Industry published in 1920, in 1914 Lindsay Light expanded its thorium manufacturing capacity in Chicago to meet the increased domestic and foreign demand caused by the outbreak of war in Europe.

The production of thorium for the gas light mantles resulted in a sandy waste known as mill tailings that was often used as fill material. The November 1935, Lindsay Light Board of Directors' Meeting minutes discussed plans to move Lindsay Light's Streeterville operations to the City of West Chicago by September 1936. The West Chicago facility became known as the Rare Earths Facility or REF. In West Chicago, Lindsay Light and its successors continued to produce thorium as well as other radioactive materials for commercial and defense-related purposes. As a result of Lindsay Light's Rare Earths Facility thorium manufacturing and disposal activities, four West Chicago areas were listed on the NPL.

In the West Chicago area, EPA, with the assistance of IEMA, has overseen the clean-up of over 670 properties in residential areas including thorium contaminated basements and foundations, a 100-acre public park, a sewage treatment plant, and over six miles of creek and river in DuPage County. The widespread use and dispersal of the thorium material as fill in West Chicago likely reflects a similar widespread dispersal of the Lindsay Light thorium residuals in Chicago. Unlike the relatively open areas in the City of West Chicago where the extensive nature of the thorium contamination was relatively easy to identify, most of the Lindsay Light thorium was shielded from detection by asphalt, sidewalks, streets, and buildings. Consequently, appropriate response actions are necessary to monitor for thorium contamination whenever subsurface soils are excavated or exposed to assure construction activities will not result in the uncontrolled exposure to or release of thorium contamination or improper disposal of the thorium-contaminated soils at or from the Site.

The availability of other appropriate federal or state response mechanisms to respond to the release;

As described in Section II and the Administrative Record, to date U.S. EPA has taken the lead in investigating and directing the cleanup of Lindsay Light-related thorium contamination in Streeterville. Private PRPs, such as the owner of 164 East Grand Avenue, have routinely entered into ASAOCs with U.S. EPA and pursuant to the ASAOCs; those private PRPs have funded the cleanups and paid U.S. EPA's response costs. There are no other appropriate federal or state response mechanisms to respond to the release.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the contaminants, radioactive materials that cause external exposure, inhalation, ingestion, and direct contact hazards, as described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions:

1. Proposed Action Description:

PRP activities at this Site will include, but are not limited to, excavation and proper disposal of contaminated soils while renovation and constructing a 2-story building. EPA will request that the Site owner place a recorded uniform environmental covenant institutional control on the Site that runs with the land and that will require radiation monitoring whenever subsurface soils at the Site are exposed or excavated as well as proper management and disposal of any radioactively-contaminated material encountered.

2. Contribution to Remedial Performance:

The proposed action will not impede future responses based upon available information.

3. Applicable or Relevant and Appropriate Requirements (ARARs)

All applicable or relevant and appropriate requirements ("ARARs") will be complied with to the extent practicable. The primary federal Applicable or Relevant and Appropriate Regulation for radioactive soil cleanup criteria is Title 40 CFR Part 192,

“Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings.” Ancillary ARARs include the Nuclear Regulatory Commission’s (“NRC”) Title 10 CFR Part 20, “Standards for Protection Against Radiation,” NRC Regulatory Guide 1.86, “Termination of Operating License for Nuclear Reactors,” and the Department of Transportation’s Title 49 for shipping hazardous materials. Relevant EPA guidance includes OSWER Directive No. 9200.4-25, issued February 12, 1998, regarding the “Use of Soil Cleanup Criteria in 40 CFR Part 192, as Remediation Goals for CERCLA Site.”

Many of the regulations carried out by the NRC have been delegated to the Illinois Emergency Management Agency, Division of Nuclear Safety. The State has previously identified the regulations at 32 Ill. Administrative Code 332, Licensing Requirements for Source Material Milling Facilities which contain the licensing requirements for source material milling facilities in Illinois as relevant and appropriate to the cleanup of thorium in Streeterville. The cleanup standard for soils and sediment at the Site derived from the foregoing federal and state regulations is 7.1 pCi/g combined radium.

U.S. EPA will also implement the principle of ALARA (As Low As Reasonably Achievable) which refers to the cleanup of all materials above the cleanup standard, to the extent practicable. ALARA is described in DOE and NRC orders and regulations and in U.S. EPA regulations at 40 CFR § 192.22. U.S. EPA made the decision to achieve ALARA in an attempt to maximize protection of human health.

4. Project Schedule:

Not applicable

B. Estimated Costs:

Not available, since this is an Enforcement Action Memorandum.

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants or contaminants at the facility which may pose an imminent and substantial endangerment to public health and safety, and to the environment. These response actions do not impose a burden on the affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

VI. CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed or non-action may result in increased likelihood of external exposure, inhalation, ingestion or direct contact to human populations accessing and working on the

site. Also, since there is no threshold for radiological risk, additional exposure to radiological materials will increase the cancer risk.

VII. OUTSTANDING POLICY ISSUES

None.

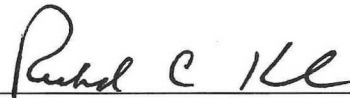
VIII. ENFORCEMENT

For Administrative purposes, information concerning confidential enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Lindsay Light II Site/164 East Grand Avenue, Chicago, Illinois, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record for this Site (Attachment 2). Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal action and I recommend your approval of the proposed removal action. You may indicate your decision by signing below.

APPROVE:



Director, Superfund Division

11-9-12

Date

DISAPPROVE:

Director, Superfund Division

Date

Enforcement Confidential Addendum

Attachments

- 1 Environmental Justice Map
2. Index to the Administrative Record

cc: S. Fielding, U.S. EPA, 5203-G
V. Darby, U.S. Department of Interior, w/o Enf Addendum
J. Kim, Illinois Environmental Protection Agency, w/o Enf. Addendum
T. Rettig, Illinois Department of Natural Resources, w/o Enf. Addendum
B. Everetts, Illinois Environmental Protection Agency, w/o Enf. Addendum
A. Khayyat, Illinois Emergency Management Agency, w/o Enf. Addendum
J. Johnson, Illinois Emergency Management Agency, w/o Enf. Addendum
M. Ames, Chicago Department of Law , w/o Enf. Addendum
B. Haller, Chicago Department of Planning and Development, w/o Enf. Addendum

BCC PAGE

LINDSAY LIGHT II
OPERABLE UNIT 20
163 E. GRAND AVENUE

HAS BEEN REDACTED

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ENFORCEMENT ADDENDUM

3 PAGES

LINDSAY LIGHT II SITE
OPERABLE UNIT 20, 164 EAST GRAND AVENUE
CHICAGO, ILLINOIS

OCTOBER 2012

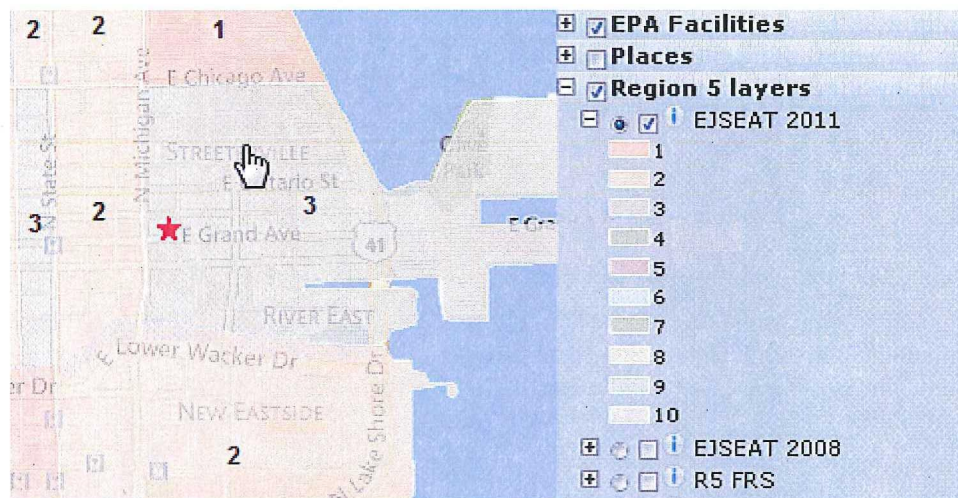
HAS BEEN REDACTED

ENFORCEMENT SENSITIVE
DO NOT RELEASE
NOT SUBJECT TO DISCOVERY
FOIA EXEMPT

Attachment 1

Superfund EJ Analysis for the Lindsay Light II OU 20 Site

Lindsay Light Site Map Showing EJ SEAT Values For Surrounding Area



Lindsay Light II Site / OU 20 Map Showing EJ SEAT Values for Surrounding Area. The values obtained from the EJSEAT 2011 are to be used for screening level analyses and should not be considered a definitive metric. EJSEAT 2011 is under development and review; therefore the values obtained from the tool should be considered interim.

ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

ADMINISTRATIVE RECORD

FOR

LINDSAY LIGHT II SITE
OPERABLE UNIT 20: 164 E. GRAND
CHICAGO, COOK COUNTY, ILLINOIS

ORIGINAL

OCTOBER 30, 2012

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
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2	00/00/00	DK Realty Partners, LLC	File	Bidders Information Package for Former Boston Blackie's (SDMS ID: 443623)	435
3	10/01/00	Simon, V., U.S. EPA	Rosenblum, R., Rosenblum & Vandenburg	Letter re: Result of Walkover Survey of Parking Lot at 166 E. Grand Ave. (SDMS ID: 226193)	4
4	10/10/00	Simon, V., U.S. EPA	Property Owners	Letter re: Walkover Survey of Parking Lot at 166 E. Grand Ave. w/ Attached Consent to Access to Property (NOT SIGNED) (SDMS ID: 226196)	4
5	11/08/00	Simon, V., U.S. EPA	Rosenblum, R., Rosenblum & Vandenburg	Letter re: Walkover Survey of Parking Lot at 166 E. Grand Ave. (SDMS ID: 226195)	3
6	11/15/00	Rosenblum, R., Rosenblum & Vandenburg	Simon, V., U.S. EPA	Letter re: Transmittal of Signed Consent to Access to Property (SDMS ID: 226194)	2
7	08/21/09	Kornder, S., AECOM	Prasad, N., People's Gas	Letter re: Radiological Survey of Right-of-Way Utility Excavation w/ Attached Permit for 100 to 199 E. Grand Avenue (SDMS ID: 337867)	6
8	06/15/10	City of Chicago/ Department of Environment	File	Map: Streeterville Thorium Investigation	1
9	05/11/11	DK Realty Partners, LLC	Public	Sealed Bid Due Date Time and Location Brochure (SDMS ID: 443622)	2

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11	07/10/12	Valdivia, R., Chicago Department of Public Health	Fulghum, M., U.S. EPA, V. Oleszkiewics, Duane Morris LLP & R. Widman, Widman, Tronox LLP	Memorandum re: Notification of Permit Application for 164 E. Grand Ave. (SDMS ID: 439628)	4
12	10/03/12	Huber G., Stan A. Huber Consultants, Inc.	Polcano, A., Old Veteran Construction, Inc.	Letter re: 164 E. Grand Ave. Thorium Monitoring w/ Attachment (SDMS ID: 445180)	4
13	10/25/12	U.S. EPA/ FIELDS	U.S. EPA	Map: Streeterville XRF Sampling for Arsenic	1
14	10/25/12	U.S. EPA/ FIELDS	U.S. EPA	Map: Streeterville XRF Sampling for Lead	1
15	10/29/12	Huber, G., Stan A. Huber Consultants, Inc.	Rest, D., HBK Engineering, LLC	Letter re: Thorium Monitoring at Grand Ave. & St. Clair St. on October 24, 2012	4
15	00/00/00	Simon, V. & E. Jablonowski, U.S. EPA	Karl, R., U.S. EPA	Enforcement Action Memorandum: Determination of Threat to Public Health and or the Environment at the Lindsay Light II/ 164 E. Grand Site (PENDING)	